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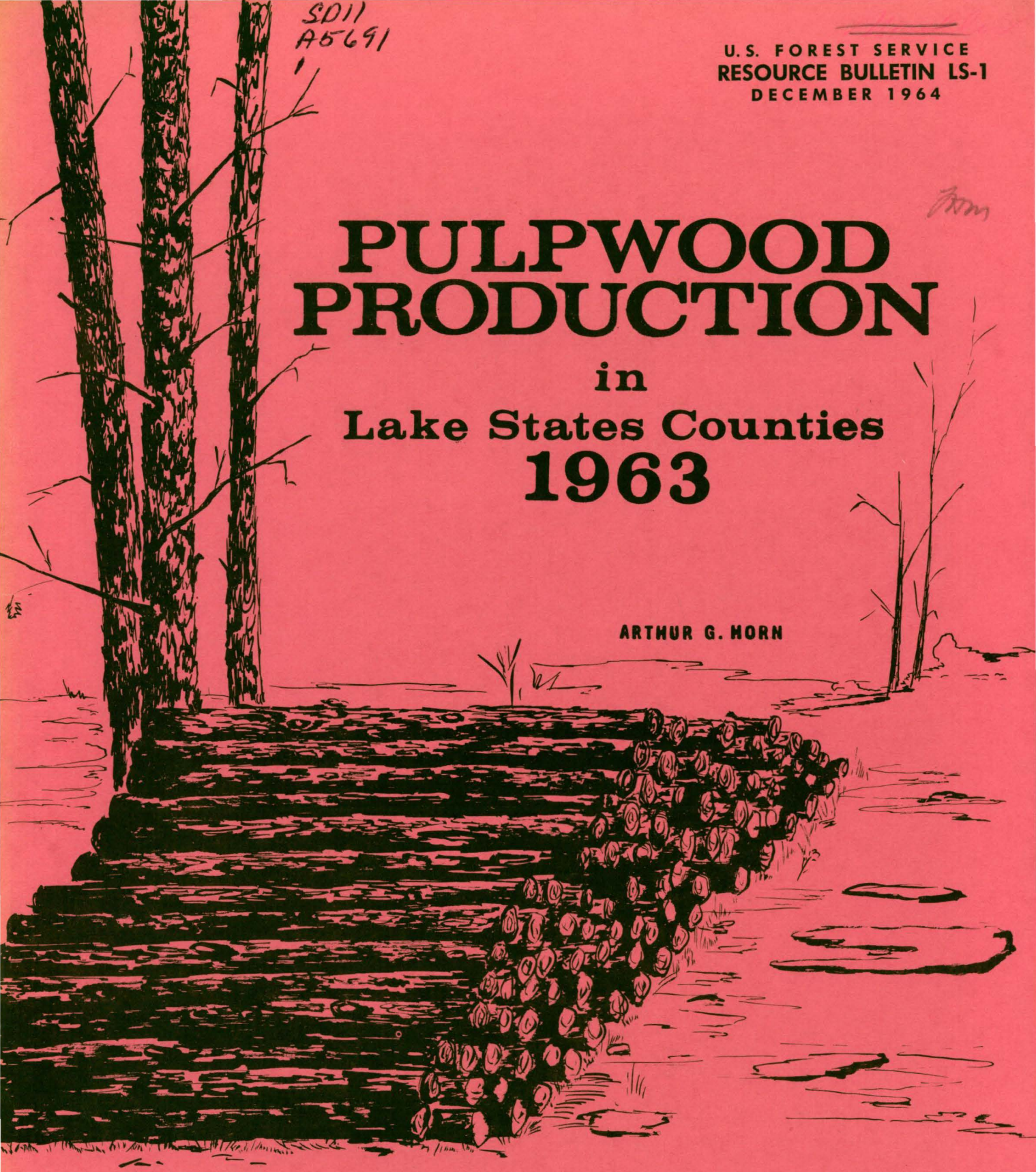
PULPWOOD PRODUCTION in Lake States Counties 1963



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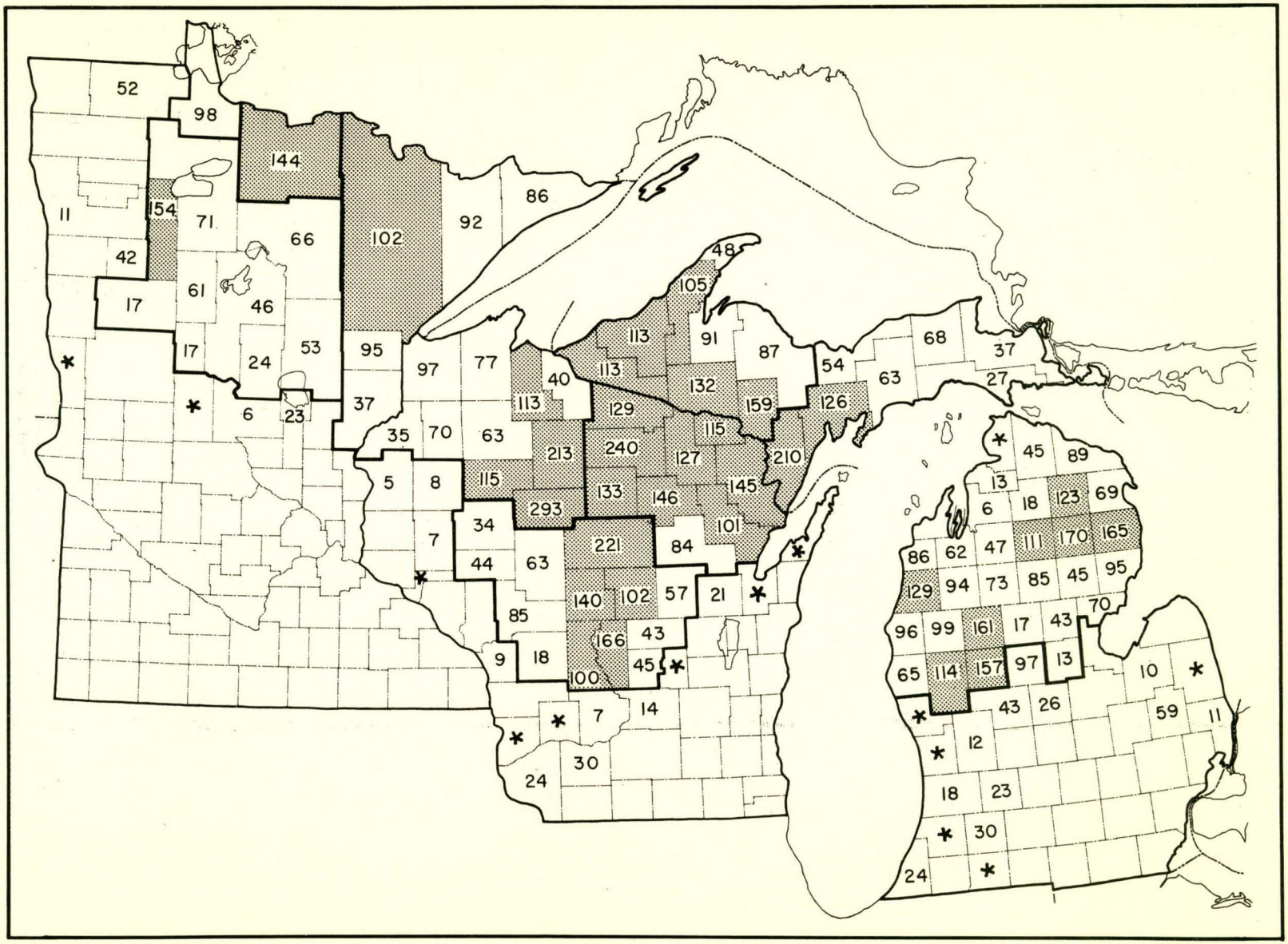
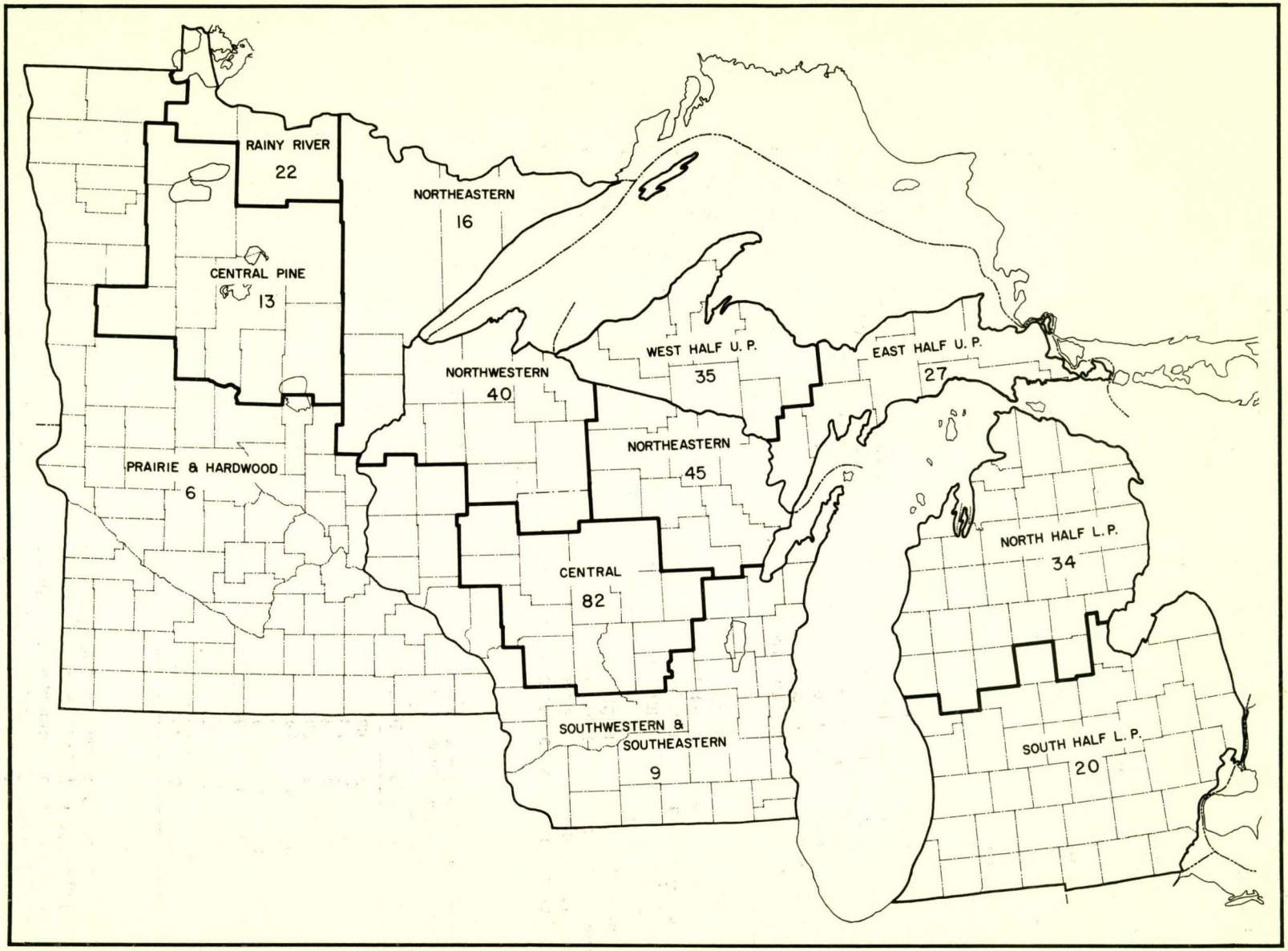


Cords of pulpwood cut per 1,000 acres of stocked commercial forest land in the principal pulpwood-producing counties, Lake States, 1963. Cross-hatching shows counties that supplied 100 or more cords of pulpwood per 1,000 acres of stocked commercial forest land. The heavy lines delineate the boundaries of the Forest Survey districts in each State. The asterisk (*) indicates a pulpwood production of less than 5 cords per 1,000 acres.



Cords of pulpwood cut per thousand cords of merchantable volume in principal pulpwood species, by Forest Survey district, 1963.

In number of users, aspen continues to be first, followed by balsam fir and spruce. Four mills processed slabwood and other unchipped mill residue in 1963, compared to only two the previous year.

Wisconsin Takes the Lead. — Wisconsin, for the first time, was the region's leading pulpwood-producing State. With a pulpwod harvest of 1,302,073 cords, Wisconsin's cut surpassed Michigan's by a scant 5,000 cords. The harvest was up a substantial 14 percent over that of the previous year. Aspen, hard hardwoods, and pine were the species most heavily cut. About 1,262,000 cords (97 percent) were delivered to Wisconsin mills, the remaining 40,000 cords (3 percent) were exported to Minnesota, Michigan, and Central States mills.

Forty-seven of Wisconsin's 71 counties produced pulpwood during the year. Twenty-four of the pulp-producing counties increased their cut over that of the previous year. Oneida, Price, and Taylor Counties in the north central area yielded the largest volumes. Taylor County posted the largest gain with an increase of 25,000 cords, while Iron County declined the most, dropping from 26,000 to 15,000 cords.

Wisconsin's annual pulpwood production has increased more (percentagewise) than has local pulpwood consumption. In short, Wisconsin is becoming more self-sufficient in supplying its mills with wood. For example, in 1946 Wisconsin forests supplied only 23 percent of the pulpwood received at resident mills compared to 54 percent in 1963 (table 1). The short-fibered species in particular were supplied in greater amounts from Wisconsin forests.

TABLE 1. — *Wisconsin's pulpwood harvest as a percent of Wisconsin mill pulpwood receipts for specified years*

Species	1946	1951	1956	1961	1962	1963
Aspen	49	49	67	72	73	70
Balsam fir	17	23	23	34	30	35
Birch	30	67	78	77	84	79
Hemlock	28	43	39	52	43	46
Pine	25	24	35	47	48	41
Spruce	5	5	5	6	5	6
Tamarack	15	12	39	36	29	26
Misc. hdwds.	79	91	99	102	91	99
Slabs	—	--	—	88	55	69
Wood chips	—	—	—	91	40	49
All wood	23	27	45	55	54	54

Michigan Has Record Harvest. — Michigan produced more pulpwood in 1963 than in any previous year. Pulpwood production amounted to approximately 1,297,000 cords, 6 percent more than in 1962. The cut of most species showed increases. Those showing a decrease were tamarack, hard hardwoods, and pine — dropping 28, 9, and 5 percent, respectively. In 1963 about 669,000 cords, representing about 52 percent of the total pulpwood harvest, were delivered to Michigan pulpmills; the remaining 628,000 cords were exported to Wisconsin. Larger exports during the past 2 years have been instrumental in bringing about the general rise in pulpwood production.

All 15 counties in Upper Michigan produced pulpwood in 1963, while in Lower Michigan cutting was done in 54 of the 68 counties. Counties that yielded the largest cuts were Menominee, Marquette, and Iron in the Upper Peninsula, and Oscoda, Montmorency, and Crawford in the Lower Peninsula. Iron County had the largest gain with an increase of 31,000 cords. The cut in Claire County declined precipitately from 22,000 to 3,000 cords, reflecting the termination of pulpwood procurement by one mill. This wide variation was atypical, as most counties showed a reasonably steady rate of production.

Michigan's annual pulpwood cut continues to exceed the quantity consumed by its resident mills. Although this has been the pattern through the years, additional mill capacity has recently brought consumption and cut closer together. For example, in 1963 the cut of pulpwood from Michigan timber exceeded roundwood receipts of resident mills by 75 percent compared to 103 percent in 1946 (table 2). More of the pulpwood harvest is being retained at home, largely because of the increased use of aspen by Michigan mills. Hemlock, balsam, and pine continue to make up most of the pulpwood exports.

TABLE 2. — *Michigan's pulpwood harvest as a percent of Michigan mill pulpwood receipts for specified years*

Species	1946	1951	1956	1961	1962	1963
Aspen	358	294	167	159	155	166
Balsam fir	316	173	195	169	297	247
Birch	—	—	—	254	150	251
Hemlock	309	169	—	—	—	—
Pine	100	77	209	143	189	207
Spruce	96	102	124	129	115	112
Tamarack	—	—	—	—	—	—
Misc. hdwds.	100	103	129	105	123	106
Slabs	—	—	—	—	—	—
Wood chips	—	—	—	—	—	—
All wood	203	161	181	158	180	175

Minnesota Production Has Moderate Increase. — Pulpwood production in Minnesota amounted to approximately 1,063,000 cords in 1963. This was an increase of about 9 percent over 1962 and only a trifle below the all-time high recorded in 1956. With the exceptions of balsam fir and birch, the production of all species showed increases from the previous year. Aspen and other hardwoods

were cut more heavily for pulpwood than ever before. Continuing the trend established during the past several years a larger proportion of the pulpwood harvested in the State (about 78 percent) was retained for home consumption. About 828,000 cords were delivered to Minnesota mills; the remaining 235,000 cords were exported to Wisconsin and to pulpmills located outside of the Lake States region.

Pulpwood cutting in 1963 was limited to 23 of Minnesota's 87 counties. Twelve of the counties increased their cut over that of the previous year. St. Louis, Koochiching, and Lake Counties made the largest cuts. St. Louis County registered the biggest gain with an increase of 34,000 cords. Cook County declined the most, dropping about 9,000 cords.

Looking back 20 years, the pulpwood cut from local timber was nearly twice the amount needed by Minnesota mills. Since then exports to Wisconsin and Michigan mills have become progressively smaller. In 1963, for example, the local pulpwood cut exceeded local pulpwood consumption by a mere 15 percent (table 3). A larger proportion of the spruce, balsam, and pine pulpwood harvest now is retained in the State. Conversely, more aspen pulpwood is consumed by resident mills than is cut in the State.

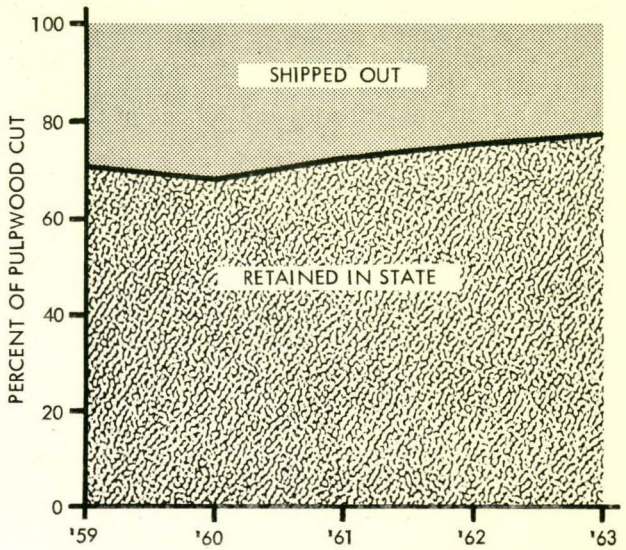
TABLE 3. — *Minnesota's pulpwood harvest as a percent of Minnesota mill pulpwood receipts for specified years*

Species	1946	1951	1956	1961	1962	1963
Aspen	123	96	97	98	97	97
Balsam fir	150	207	203	163	149	134
Birch	—	—	147	105	133	142
Hemlock	—	—	—	—	—	—
Pine	190	141	126	110	106	110
Spruce	183	139	162	201	195	162
Tamarack	—	195	154	—	—	—
Misc. hdwds.	—	100	100	100	101	102
Slabs	—	—	—	—	—	—
Wood chips	—	—	—	—	—	100
All wood	163	131	121	123	118	115

PULPWOOD PRODUCTION BY STATE OF ORIGIN AND DESTINATION, PAST FIVE YEARS

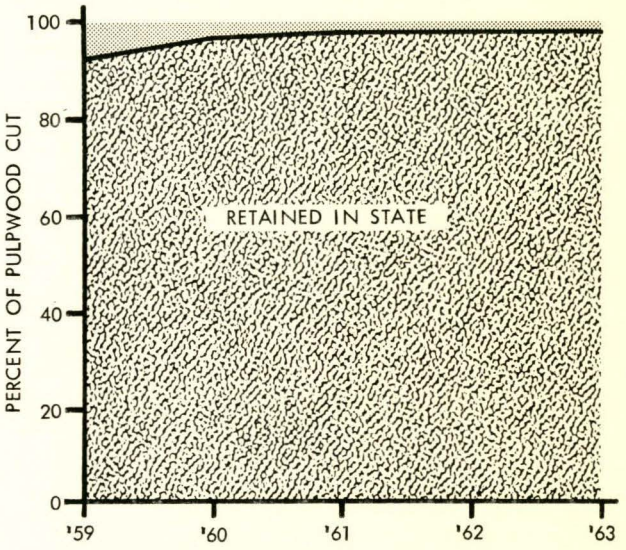
MINNESOTA

Year	Total cut	Destination of pulpwood			
		Minn.	Wis.	Mich.	Other
	(Thousand standard cords)				
1959	994	721	251	7	15
1960	1,048	711	308	-	29
1961	968	712	240	-	16
1962	979	753	216	1	9
1963	1,063	828	221	-	14
5-year average	1,010	745	247	2	16



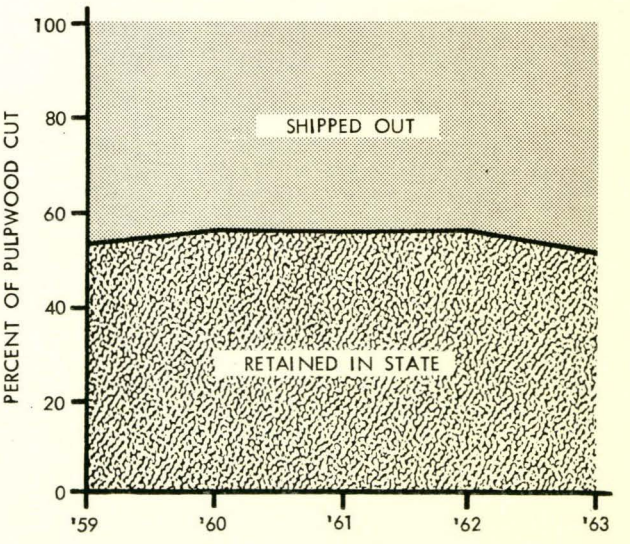
WISCONSIN

Year	Total cut	Destination of pulpwood			
		Minn.	Wis.	Mich.	Other
	(Thousand standard cords)				
1959	972	21	915	3	33
1960	1,052	19	1,008	-	25
1961	1,078	14	1,050	1	13
1962	1,140	15	1,114	1	10
1963	1,302	20	1,262	2	18
5-year average	1,109	18	1,070	1	20



MICHIGAN

Year	Total cut	Destination of pulpwood			
		Minn.	Wis.	Mich.	Other
	(Thousand standard cords)				
1959	1,053	-	447	603	3
1960	1,237	-	510	727	-
1961	1,106	-	464	628	14
1962	1,223	-	540	677	6
1963	1,297	-	633	664	-
5-year average	1,183	-	519	660	4



PULPWOOD PRODUCTION BY FOREST SURVEY DISTRICTS AND DESTINATION BY STATES, 1963

(Thousand standard cords, roughwood basis)

MINNESOTA

District	Total cut	Destination of pulpwood			
		Minnesota	Wisconsin	Michigan	Other
Northeastern	486	305	181	-	-
Central Pine	316	280	36	-	-
Rainy River	240	223	4	-	13
Hardwood & Prairie	21	20	*	-	1
Total	1,063	828	221	-	14

WISCONSIN

District	Total cut	Destination of pulpwood			
		Minnesota	Wisconsin	Michigan	Other
Northeastern	552	-	550	2	-
Northwestern	488	20	468	-	-
Central	243	-	236	-	7
Southeastern & Southwestern	19	-	8	-	11
Total	1,302	20	1,262	2	18

MICHIGAN

District	Total cut	Destination of pulpwood			
		Minnesota	Wisconsin	Michigan	Other
E. ½ Up. Pen.	304	-	245	59	-
W. ½ Up. Pen.	476	-	384	92	-
N. ½ Low. Pen.	489	-	4	485	-
S. ½ Low. Pen.	28	-	-	28	-
Total	1,297	-	633	664	-

* Less than 500 cords.

PULPWOOD PRODUCTION BY SPECIES, STATE, AND FOREST SURVEY DISTRICTS FOR SPECIFIED YEARS

(Thousand standard cords, roughwood basis)

ASPEN

State and district	Annual production				
	1959	1960	1961	1962	1963
MINNESOTA:					
Northeastern	119	150	152	170	181
Central Pine	169	158	137	146	150
Rainy River	86	77	74	83	94
Prairie & Hardwood	7	7	6	7	8
Total	381	392	369	406	433
WISCONSIN:					
Northeastern	206	281	280	301	321
Northwestern	172	212	203	210	219
Central	51	45	46	54	71
Southeastern & Southwestern	2	2	1	7	2
Total	431	540	530	572	613
MICHIGAN:					
E.½ Up. Pen.	94	111	91	96	122
W.½ Up. Pen.	142	173	168	174	203
N.½ Low.Pen.	263	355	280	305	314
S.½ Low.Pen.	24	30	19	26	23
Total	523	669	558	601	662
Lake States	1,335	1,601	1,457	1,579	1,708

* Less than 500 cords.

BALSAM FIR

State and district	Annual production				
	1959	1960	1961	1962	1963
MINNESOTA:					
Northeastern	59	62	47	38	31
Central Pine	40	49	35	40	38
Rainy River	30	33	29	32	33
Prairie & Hardwood	1	1	*	-	*
Total	130	145	111	110	102
WISCONSIN:					
Northeastern	31	25	30	24	33
Northwestern	20	24	30	22	27
Central	1	1	1	*	1
Southeastern & Southwestern	*	-	*	*	*
Total	52	50	61	46	61
MICHIGAN:					
E.½ Up. Pen	57	73	58	56	63
W.½ Up. Pen.	45	55	48	44	50
N.½ Low.Pen.	7	7	9	4	8
S.½ Low.Pen.	-	-	-	-	-
Total	109	135	115	104	121
Lake States	291	330	287	260	284

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(Pulpwood production cont'd.)

(Thousand standard cords, roughwood basis)

JACK PINE[1/]

State and district	Annual production				
	1959	1960	1961	1962	1963
MINNESOTA:					
Northeastern	102	138	127	126	136
Central Pine	121	64	56	53	50
Rainy River	8	13	13	13	14
Prairie & Hardwood	8	10	9	9	8
Total	239	225	205	201	208
WISCONSIN:					
Northeastern	47	38	42	42	45
Northwestern	56	53	35	71	53
Central	84	29	73	70	69
Southeastern & Southwestern	-	4	4	5	3
Total	187	124	154	188	170
MICHIGAN:					
E.½ Up. Pen.	59	51	38	61	54
W.½ Up. Pen.	33	22	13	29	36
N.½ Low.Pen.	104	114	103	93	84
S.½ Low.Pen.	1	1	2	1	*
Total	197	188	156	184	174
Lake States	623	537	515	573	552

SPRUCE

State and district	Annual production				
	1959	1960	1961	1962	1963
MINNESOTA:					
Northeastern	108	146	131	114	125
Central Pine	45	42	35	40	39
Rainy River	65	67	70	63	90
Prairie & Hardwood	2	1	4	*	1
Total	220	256	240	217	255
WISCONSIN:					
Northeastern	13	11	13	8	14
Northwestern	7	6	10	6	5
Central	1	1	*	1	*
Southeastern & Southwestern	-	-	-	*	*
Total	21	18	23	15	19
MICHIGAN:					
E.½ Up. Pen.	37	52	45	41	37
W.½ Up. Pen.	39	49	44	41	46
N.½ Low.Pen.	7	7	7	4	5
S.½ Low.Pen.	-	-	-	-	-
Total	83	108	96	86	88
Lake States	324	382	359	318	362

1/ Includes small quantity of red and white pine.

* Less than 500 cords.

(Cont'd on next page)

(Pulpwood production cont'd.)

(Thousand standard cords, roughwood basis)

BIRCH

State and district	Annual production				
	1959	1960	1961	1962	1963
MINNESOTA:					
Northeastern	1	*	*	*	*
Central Pine	*	1	1	2	*
Rainy River	-	-	-	-	*
Prairie & Hardwood	-	-	-	-	*
Total	1	1	1	2	*
WISCONSIN:					
Northeastern	4	4	12	4	8
Northwestern	22	19	21	31	36
Central	*	4	1	6	6
Southeastern & Southwestern	-	-	*	-	*
Total	26	27	34	41	50
MICHIGAN:					
E.½ Up. Pen.	3	3	6	5	11
W.½ Up. Pen.	1	2	5	3	4
N.½ Low.Pen.	-	4	5	13	8
S.½ Low.Pen.	-	-	-	-	-
Total	4	9	16	21	23
Lake States	31	37	51	64	73

HEMLOCK

State and district	Annual production				
	1959	1960	1961	1962	1963
MINNESOTA:					
Northeastern	-	-	-	-	-
Central Pine	-	-	-	-	-
Rainy River	-	-	-	-	-
Prairie & Hardwood	-	-	-	-	-
Total	-	-	-	-	-
WISCONSIN:					
Northeastern	18	17	18	21	25
Northwestern	26	27	25	18	24
Central	5	8	4	3	3
Southeastern & Southwestern	-	-	*	*	*
Total	49	52	47	42	52
MICHIGAN:					
E.½ Up. Pen.	*	3	2	3	6
W.½ Up. Pen.	39	43	42	54	56
N.½ Low.Pen.	-	-	-	-	-
S.½ Low.Pen.	-	-	-	-	*
Total	39	46	44	57	62
Lake States	88	98	91	99	114

* Less than 500 cords.

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(Pulpwood production cont'd.)

(Thousand standard cords, roughwood basis)

State and district	TAMARACK Annual production					MISC. HARDWOODS Annual production				
	1959	1960	1961	1962	1963	1959	1960	1961	1962	1963
MINNESOTA:										
Northeastern	2	5	3	6	9	1	1	1	4	4
Central Pine	6	11	5	3	4	-	*	21	21	35
Rainy River	3	3	*	-	-	11	9	9	9	9
Prairie & Hardwood	-	-	*	-	*	-	-	3	*	3
Total	11	19	8	9	13	12	10	34	34	51
WISCONSIN:										
Northeastern	4	4	2	2	1	53	73	52	46	50
Northwestern	3	2	5	4	5	58	63	67	67	100
Central	-	*	*	*	*	47	61	74	69	74
Southeastern & Southwestern	-	-	-	*	*	1	7	8	6	9
Total	7	6	7	6	6	159	204	201	188	233
MICHIGAN:										
E.½ Up. Pen.	*	2	2	3	1	4	4	2	13	2
W.½ Up. Pen.	3	3	2	1	2	51	43	37	58	54
N.½ Low.Pen.	-	-	-	-	-	28	16	46	67	70
S.½ Low.Pen.	-	-	-	-	-	7	12	11	6	5
Total	3	5	4	4	3	90	75	96	144	131
Lake States	21	30	19	19	22	261	289	331	366	415

* Less than 500 cords

(Cont'd on next page)

(Thousand standard cords, roughwood basis)

State and district	RESIDUE & CHIPS[1/] Annual production					ALL SPECIES[2/] Annual production				
	1959	1960	1961	1962	1963	1959	1960	1961	1962	1963
MINNESOTA:						MINNESOTA:				
Northeastern	-	-	-	-	-	Northeastern	392	502	461	458	486
Central Pine	-	-	-	-	-	Central Pine	381	325	290	305	316
Rainy River	-	-	-	-	-	Rainy River	203	202	195	200	240
Prairie & Hardwood	-	-	-	*	1	Prairie & Hardwood	18	19	22	16	21
Total	-	-	-	*	1	Total	994	1,048	968	979	1,063
WISCONSIN:						WISCONSIN:					
Northeastern	18	13	9	18	55	Northeastern	394	466	458	466	552
Northwestern	13	10	7	14	19	Northwestern	377	416	403	443	488
Central	7	6	4	8	19	Central	196	155	203	211	243
Southeastern & Southwestern	2	2	1	2	5	Southeastern & Southwestern	5	15	14	20	19
Total	40	31	21	42	98	Total	972	1,052	1,078	1,140	1,302
MICHIGAN:						MICHIGAN:					
E.½ Up. Pen.	-	-	-	*	8	E.½ Up. Pen.	254	299	249	278	304
W.½ Up. Pen.	5	2	21	22	25	W.½ Up. Pen.	358	392	375	426	476
N.½ Low.Pen.	-	-	-	-	-	N.½ Low.Pen.	409	503	450	486	489
S.½ Low.Pen.	-	-	-	-	-	S.½ Low.Pen.	32	43	32	33	28
Total	5	2	21	22	33	Total	1,053	1,237	1,106	1,223	1,297
Lake States	45	33	42	64	132	Lake States	3,019	3,337	3,152	3,342	3,662

1/ Not reported by district. Prorated on basis of most recent lumber output figures.

2/ Including residues and chips.

* Less than 500 cords.

PULPWOOD PRODUCTION BY COUNTY AND SPECIES, 1963

MINNESOTA

(Thousand standard cords, roughwood basis)

District 1/ & county	All species	Aspen	Balsam	Birch	Pine	Spruce	Tamarack	Misc. hdwds.	Residue & chips
NORTHEASTERN:									
Carlton	29	24	2	-	2	1	*	-	
Cook	56	*	2	-	9	45	-	-	
Lake	93	15	3	-	53	22	-	-	
Pine	14	9	1	-	2	*	-	2	
St. Louis	294	133	23	*	70	57	9	2	
Total	486	181	31	*	136	125	9	4	-
CENTRAL PINE:									
Aitkin	37	28	3	-	2	2	1	1	
Becker	6	6	*	-	-	*	-	-	
Beltrami	58	25	9	*	10	11	1	2	
Cass	42	15	4	*	11	3	1	8	
Clearwater	50	23	1	*	2	3	*	21	
Crow Wing	10	*	1	-	8	1	-	-	
Hubbard	25	17	1	*	5	1	*	1	
Itasca	86	36	19	-	10	18	1	2	
Wadena	2	*	-	-	2	-	-	-	
Total	316	150	38	*	50	39	4	35	-
RAINY RIVER:									
Koochiching	201	85	32	-	7	68	-	9	
Lake of the Woods	39	9	1	-	7	22	-	-	
Total	240	94	33	*	14	90	-	9	-
HARDWOOD:									
Mille Lacs	3	-	-	-	-	-	-	3	
Morrison	1	-	*	-	1	*	-	-	
Todd	*	-	-	-	*	-	-	-	
Total	5	-	*	*	1	*	-	3	1
PRAIRIE:									
Mahnomen	5	5	-	-	-	-	-	-	
Polk	1	1	-	-	-	*	*	-	
Roseau	10	2	-	-	7	1	-	-	
Wilkin	*	-	-	-	*	-	-	-	
Total	16	8	-	-	7	1	*	-	-
State total	1,063	433	102	*	208	255	13	51	1

1/ Includes only those counties that supplied pulpwood in 1963.
* Less than 500 cords.

WISCONSIN

(Thousand standard cords, roughwood basis)

District[1] & county	All species	Aspen	Balsam	Birch	Hemlock	Pine	Spruce	Tamarack	Misc. hdwds.	Residue[2] & chips
NORTHEASTERN:										
Florence	28	18	4	*	4	*	2	-	*	
Forest	64	45	7	*	7	2	2	*	1	
Langlade	50	31	3	1	1	*	1	*	13	
Lincoln	43	26	1	1	1	4	1	*	9	
Marinette	78	49	8	*	3	11	3	*	4	
Oconto	37	30	1	-	2	3	*	-	1	
Oneida	115	68	6	3	3	17	4	1	13	
Shawano	30	25	1	*	2	1	*	*	1	
Vilas	52	29	2	3	2	7	1	*	8	
Total	552	321	33	8	25	45	14	1	50	55
NORTHWESTERN:										
Ashland	55	27	11	2	4	2	1	*	8	
Bayfield	56	30	2	10	3	10	*	*	1	
Burnett	10	-	-	*	-	9	*	1	*	
Douglas	49	26	*	1	-	17	2	1	2	
Iron	15	5	4	1	4	*	1	-	*	
Price	102	47	5	11	3	1	1	*	34	
Rusk	35	19	*	*	1	-	*	*	15	
Sawyer	36	18	2	6	3	1	*	1	5	
Taylor	88	41	2	5	5	*	*	*	35	
Washburn	23	6	1	*	1	13	*	2	*	
Total	488	219	27	36	24	53	5	5	100	19
CENTRAL:										
Adams	33	4	-	*	-	17	-	-	12	
Chippewa	7	6	*	*	*	1	-	*	*	
Clark	16	13	*	*	*	*	*	-	3	
Eau Claire	6	2	-	-	-	4	-	*	-	
Jackson	25	4	-	-	-	18	-	*	3	
Juneau	22	5	-	-	-	14	-	-	3	
Marathon	65	22	1	6	2	1	*	*	33	
Marquette	3	*	-	-	-	1	-	-	2	
Monroe	4	1	-	-	-	3	-	*	*	
Portage	12	2	*	*	*	3	*	-	7	
Waupaca	7	5	*	*	1	*	*	-	1	
Waushara	4	1	-	-	-	2	-	-	1	
Wood	20	6	-	-	-	5	-	-	9	
Total	243	71	1	6	3	69	*	*	74	19

WISCONSIN (cont'd)

(Thousand standard cords, roughwood basis)

District 1/ & county	All species	Aspen	Balsam	Birch	Hem-lock	Pine	Spruce	Tam-arack	Misc. hdwds.	Residue 2/ & chips
SOUTHWESTERN:										
Barron	1	*	-	-	-	*	-	-	1	
Crawford	*	-	-	-	-	-	-	-	*	
Dunn	1	*	-	-	-	1	-	-	-	
Grant	4	-	-	*	-	*	-	-	4	
Iowa	3	-	-	-	-	-	-	-	3	
LaCrosse	1	*	-	-	-	1	-	-	-	
Pepin	*	-	-	-	-	-	-	-	*	
Polk	1	-	-	*	-	1	-	*	*	
Richland	*	*	-	-	-	-	-	-	-	
Sauk	1	1	-	-	-	*	-	-	-	
Total	15	1	-	*	-	3	-	*	8	3
SOUTHEASTERN:										
Brown	*	*	-	-	-	*	-	-	*	
Columbia	1	*	-	-	*	*	-	-	1	
Door	*	*	*	-	-	-	*	-	-	
Green Lake	*	*	-	-	-	*	-	-	-	
Outagamie	1	1	-	-	-	-	-	*	*	
Total	4	1	*	-	*	*	*	*	1	2
State total	1,302	613	61	50	52	170	19	6	233	98

1/ Includes only those counties that supplied pulpwood in 1963.
2/ County figures are not available.
* Less than 500 cords.

MICHIGAN

(Thousand standard cords, roughwood basis)

District[1] & county	All species	Aspen	Balsam	Birch	Hem-lock	Pine	Spruce	Tam-arack	Misc. hdwds.	Residue[2] & chips
E.½ UP. PEN.:										
Alger	26	6	7	*	*	9	4	-	-	
Chippewa	26	4	3	2	-	10	6	1	-	
Delta	72	30	18	2	3	11	7	*	1	
Luce	30	4	6	1	*	13	6	*	-	
Mackinac	14	3	6	2	-	1	2	*	-	
Menominee	96	68	15	1	2	1	8	*	1	
Schoolcraft	32	7	8	3	1	9	4	*	*	
Total	304	122	63	11	6	54	37	1	2	8
W.½ UP. PEN.:										
Baraga	48	23	7	*	3	3	8	*	4	
Dickinson	59	39	10	1	1	2	5	1	*	
Gogebic	58	26	6	*	21	*	2	*	3	
Houghton	53	12	2	1	20	5	2	-	11	
Iron	76	52	7	*	5	1	6	1	4	
Keweenaw	9	-	4	-	-	-	5	-	-	
Marquette	79	24	13	1	*	24	17	*	-	
Ontonagon	69	27	1	1	6	1	1	*	32	
Total	476	203	50	4	56	36	46	2	54	25
N.½ LOW. PEN.:										
Alcona	51	41	1	2	-	2	*	-	5	
Alpena	15	11	1	1	-	*	*	-	2	
Antrim	1	1	-	*	-	-	-	-	-	
Arenac	*	*	-	-	-	*	-	-	-	
Benzie	9	6	-	*	-	*	-	-	3	
Charlevoix	2	2	*	*	-	-	-	-	*	
Cheboygan	14	11	1	*	-	1	1	-	*	
Clare	3	3	*	*	-	-	*	-	*	
Crawford	30	7	*	*	-	20	*	-	3	
Emmett	*	*	-	*	-	-	-	-	*	
Gladwin	6	5	-	1	-	-	-	-	*	
Grand Traverse	7	4	-	*	-	3	-	-	*	
Iosco	20	8	2	*	-	7	2	-	1	
Kalkaska	9	6	-	*	-	2	-	-	1	
Lake	28	14	-	*	-	8	-	-	6	
Manistee	27	9	-	*	-	1	-	-	17	
Mason	15	7	-	*	-	2	-	-	6	
Mecosta	16	15	-	-	-	*	-	-	1	
Midland	2	2	-	-	-	*	-	-	-	
Missaukee	13	8	-	*	-	3	-	-	2	
Montmorency	31	24	*	1	-	3	*	-	3	
Newaygo	30	27	-	*	-	1	-	-	2	
Oceana	8	8	-	*	-	*	-	-	*	
Ogema	11	7	-	*	-	4	-	-	*	
Osceola	24	16	-	*	-	*	-	-	8	
Oscoda	48	26	*	1	-	20	*	-	1	
Otsego	4	1	*	*	-	2	1	-	*	
Presque Isle	24	14	3	2	-	1	1	-	3	
Roscommon	22	18	-	*	-	3	-	-	1	
Wexford	19	13	-	*	-	1	-	-	5	
Total	489	314	8	8	-	84	5	-	70	-

MICHIGAN (cont'd)

(Thousand standard cords, roughwood basis)

District[1] & county	All species	Aspen	Balsam	Birch	Hemlock	Pine	Spruce	Tamarack	Misc. hdwds.	Residue[2] & chips
S.½ LOW. PEN.:										
Allegan	2	1	-	-	-	-	-	-	1	
Barry	1	*	-	-	-	-	-	-	1	
Berrien	1	*	-	-	-	-	-	-	1	
Branch	*	*	-	-	-	-	-	-	-	
Calhoun	1	1	-	-	-	-	-	-	*	
Genesee	1	1	-	-	*	-	-	-	-	
Gratiot	1	1	-	-	-	-	-	-	-	
Ionia	1	1	-	-	-	-	-	-	*	
Isabella	7	7	-	-	-	-	-	-	*	
Kalamazoo	1	*	-	-	-	*	-	-	1	
Kent	1	1	-	-	-	-	-	-	*	
Lapeer	5	4	-	-	-	-	-	-	1	
Livingston	*	-	-	-	-	-	-	-	*	
Monroe	*	-	-	-	-	-	-	-	*	
Montcalm	4	4	-	-	-	*	-	-	*	
Muskegon	*	*	-	-	-	*	-	-	-	
Oakland	*	-	-	-	-	-	-	-	*	
Ottawa	*	*	-	-	-	*	-	-	-	
St. Clair	1	1	-	-	-	-	-	-	*	
St. Joseph	*	*	-	-	-	-	-	-	-	
Sanilac	*	*	-	-	-	-	-	-	-	
Shiawassee	*	*	-	-	-	-	-	-	-	
Tuscola	1	1	-	-	-	-	-	-	-	
Van Buren	*	*	-	-	-	-	-	-	-	
Total	28	23	-	-	*	*	-	-	5	-
State total	1,297	662	121	23	62	174	88	3	131	33

1/ Includes only those counties that supplied pulpwood in 1963.

2/ Residue and chips were used for pulpwood only in the western half of the Upper Peninsula. Data by counties for this area are not available.

* Less than 500 cords.

REPORTS ON PULPWOOD PRODUCTION PUBLISHED BY THE LAKE STATES FOREST EXPERIMENT STATION

Data on pulpwood production have been published by the Station since 1946. One group of short 2-page Notes gives information by State and species. Another group of longer reports begun in 1959 gives more detailed information by County. All of these publications were prepared by Arthur G. Horn.

The longer reports are:

Pulpwood Production in Lake States Counties.
1959 data: Station Paper 85, 13 pp.
1960 data: Station Paper 94, 28 pp.
1961 data: Station Paper 106, 18 pp.
1962 data: Research Paper LS-5, 16 pp.

The 2-page Notes are:

Aspen Takes Lead as Pulping Species in Lake States (1946 data). Tech. Note 288.
Lake States Pulpwood Production Declines in 1947. Tech. Note 301.
Near Record Cut of Pulpwood in Lake States — 1948. Tech. Note 320.
Pulpwood Harvest Declines to Prewar Level in Lake States — 1949. Tech. Note 336.
Lake States Pulpwood Production Reverses Trend, 1950. Tech. Note 364.
Ten Years' Pulpwood Production in the Lake States (1942-1951). Tech. Note 384.
1951 Lake States Pulpwood Production Reaches All Time High. Tech. Note 398.
1952 Lake States Pulpwood Production Continues at High Level. Tech. Note 399.
Aspen Makes Up Nearly One-half of 1953 Pulpwood Cut in Lake States. Tech. Note 418.
Production of Pulpwood Continues at High Level in the Lake States, 1954. Tech. Note 436.
Lake States Pulpwood Production Shows Increase in 1955; Canadian Imports Decrease. Tech. Note 456.
Some Highlights of Pulpwood Production in the Lake States, 1946-1955. Tech. Note 457.
Lake States Pulpwood Production Reaches New High, 1956. Tech. Note 495.
Lake States Pulpwood Production Remains High — Hardwood Cut Climbs, 1957. Tech. Note 529.
Trend of Pulpwood Harvest Up in Wisconsin, Particularly in Central Area. (1957). Tech. Note 531.
Lake States Pulpwood Production and Imports Decline in 1958. Tech. Note 558.
Lake States Pulpwood Production Exceeds 3 Million Cords, 1959, Tech. Note 588.
Lake States Pulpwood Production Up 11 Percent in 1960. Tech. Note 606.
Production and Imports of Pulpwood Decline in the Lake States, 1961. Tech. Note 624.
Lake States Pulpwood Production Up While Canadian Imports Drop to All-Time Low, 1962. Res. Note LS-23.
Lake States Pulpwood Cut Continues to Climb; Wisconsin Takes Lead in Pulpwood Production (1963). Res. Note LS-48.

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